

1/9/1 DIALOG(R)File 351:Derwent WPI (c) 2003 Thomson Derwent. All rts. reserv.

007984881 **Image available**

WPI Acc No: 1989-249993/198935

XRPX Acc No: N89-190563

**Handling system for cleaning circuit boards - has fluid
drawing across boards by suction unit in bath**

Patent Assignee: GEBR SCHMID GMBH & CO (SCHM-N); GEBR SCHMID GMBH (SCHM-N)

Inventor: SCHMID D C

Number of Countries: 011 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 329807	A	19890830	EP 88102800	A	19880225	198935	B
EP 329807	B1	19930331	EP 88102800	A	19880225	199313	
DE 3879929	G	19930506	DE 3879929	A	19880225	199319	
			EP 88102800	A	19880225		
ES 2039486	T3	19931001	EP 88102800	A	19880225	199344	
EP 329807	B2	20030122	EP 88102800	A	19880225	200308	

Priority Applications (No Type Date): EP 88102800 A 19880225

Cited Patents: DE 2606984; EP 204609; FR 2412357

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

EP 329807	A	G	7		
-----------	---	---	---	--	--

Designated States (Regional): AT BE CH DE ES FR GB IT LI NL SE

EP 329807	B1	G	6	H05K-013/00	
-----------	----	---	---	-------------	--

Designated States (Regional): AT BE CH DE ES FR GB IT LI NL SE

DE 3879929	G			H05K-013/00	Based on patent EP 329807
------------	---	--	--	-------------	---------------------------

ES 2039486	T3			H05K-013/00	Based on patent EP 329807
------------	----	--	--	-------------	---------------------------

EP 329807	B2	G		H05K-013/00	
-----------	----	---	--	-------------	--

Designated States (Regional): AT BE CH DE ES FR GB IT LI NL SE

Abstract (Basic): EP 329807 A

The handling system has a liquid bath (2) with a series of feed roller pairs (7,8,9) that allow the boards to be fed horizontally through the bath. The liquid is supplied to the bath by a pumped circuit and a level (13) maintained.

In the lower half of the bath is a nozzle unit (14) that spans the width of the board and is coupled to a suction pump. A specific gap (16) is maintained between the nozzle and the board. When suction is applied liquid is drawn across the surface and through the holes in the board.

ADVANTAGE - Suction unit provides efficient cleaning of small circuit board holes.

1/3

Abstract (Equivalent): EP 329807 B

The handling system has a liquid bath (2) with a series of feed roller pairs (7,8,9) that allow the boards to be fed horizontally through the bath. The liquid is supplied to the bath by a pumped circuit and a level (13) maintained.

In the lower half of the bath is a nozzle unit (14) that spans the width of the board and is coupled to a suction pump. A specific gap (16) is maintained between the nozzle and the board.

When suction is applied liquid is drawn across the surface and through the holes in the board.

ADVANTAGE - Suction unit provides efficient cleaning of small circuit board holes. (7pp Dwg.No.1/3)

Title Terms: HANDLE; SYSTEM; CLEAN; CIRCUIT; BOARD; FLUID; DRAW; BOARD; SUCTION; UNIT; BATH